



WASTE MANAGEMENT OF ILLINOIS, INC.

601 Madison Road
East St. Louis, Illinois 62201
(618) 271-6788
(618) 271-1227 Fax

January 17, 2012

Illinois Environmental Protection Agency
Bureau of Air – Compliance Section #40
1021 North Grand Avenue East
Springfield, Ill 62702

163075AAL – St. Clair County
Cottonwood Hills Recycling and Disposal Facility

NSPS Semi-Annual Report for Period July 1, 2011 to December 31, 2011

Dear Sirs:

This letter transmits the NSPS Semi-Annual Report for the above referenced reporting period at the above referenced facility.

If you have any questions or require additional information, please call me at (618) 271-6788 Ext 2122.

Sincerely,
Waste Management of Illinois, Inc.

Ernest H Dennison, PE
District Engineer

cc: IEPA – Collinsville Field Office
2009 Mall Street
Collinsville, Illinois 62234

From everyday collection to environmental protection, Think Green®. Think Waste Management.

**COTTONWOOD HILLS
RECYCLING AND DISPOSAL FACILITY
NSPS SEMI-ANNUAL REPORT**

**For the Reporting Period
07/01/11 to 12/31/11**

**Prepared By
Waste Management of Illinois, Inc.**

January 2012

1.0 Introduction

This document consists of the semi-annual report for Cottonwood Hills Recycling and Disposal Facility in Marissa, Illinois and has been prepared in accordance with 40 CFR 60.757(f). This report covers the period of gas system operations from July 1, 2011 to December 31, 2011.

Documented in this report are exceedances of monitored parameters under 40 CFR 60.756, periods of downtime for gas collection/control devices, and any expansions/modifications to the gas collection system during the reporting period. The report is organized into three main sections: Collection systems, Control Devices and Landfill.

The gas collection system currently in place at the site consists of 20 vertical gas collection wells. The wells are connected to the gas collection laterals and header pipe which leads to a 3000 scfm open flare (control device).

The gas mover equipment is comprised of a blower at the flare station.

2.0 Collection System Summary

2.1 Exceedance of Monitored Parameters

Gauge Pressure at each Gas Collection Wellhead (40 CFR 60.756 (a)(1))

- Report all instances of positive pressure measured at the gas collection header of each individual wellhead, including value and length of time measured.
- Per 40 CFR 60.753 (b), record instances when positive pressure occurred at a wellhead in an effort to avoid a landfill fire.

There were no instances of positive pressure measured at a wellhead during the reporting period (See Exceedence Report in Attachment 1).

Monthly Oxygen or Nitrogen Concentration at Each Gas Collection Wellhead (40 CFR 60.756(a)(2))

- Report all instances, on a per well basis, when nitrogen concentrations exceeded 20% or oxygen concentrations exceed 5%. Report date, value and length of time of each exceedance.
- Detail action taken within 5 days to correct exceedance. Report date that exceedance was corrected (must be less than 15 days).

There were no instances when the oxygen concentration was above the regulatory level of 5% during the reporting period (See Exceedence Report in Attachment 1).

Temperature of the landfill gas at each wellhead (40 CFR 60.756(a)(3))

- Report all instances, on a per well basis, when landfill gas temperature exceeded 55°C (131°F).
- Detail action taken within 5 days to convert exceedance. Report date that exceedance was corrected (must be less than 15 days).

There were multiple instances of a temperature exceeding 131°F as measured at the wellhead during the reporting period (See Exceedance Report in Attachment 1). These wells have received USEPA approved temperature variances or pending variance requests (See Attachment 2). Therefore, these wells are considered to be in compliance.

2.2 Record of Operation

Description and duration of all periods when the gas stream from the collection system was diverted from the control device through a bypass line (40 CFR 60.756(b)(2)) for enclosed flare, engines or turbines, or 40 CFR 60.756(c) for utility flares).

The gas collection system at Cottonwood Hills RDF does not have a bypass line. Therefore, there were no periods of time that flow was diverted through a bypass line. All flow was directed to the permitted control device (open flare).

Description and duration of all periods when the collection system was not operating for more than 5 days.

There was no period of time during which the collection system was not operating for more than 5 days during the reporting period.

2.3 Record of Expansion

Date and location of all newly installed wells or collection system expansion (40 CFR 60.757(f)(6)).

Five new gas collection wells (MW13, MW14, MW17, MW79 and MW80) were installed during the reporting period (See Attachment 3).

3.0 Control Device Summary

3.1 Monitored Parameters

Flare Flame (Utility Flare)

- Report all periods of flare flame absence (40 CFR 60.758(c)(4)).

The open flare at Cottonwood Hills RDF is equipped with a thermocouple to continuously determine that a flame is present via temperature. Upon loss of flame (drop in temperature), the thermocouple automatically shuts down the blower.

In addition, the blower inlet control valve is automatically closed to prevent uncontrolled discharge. The lack of a flame at the flare is not indicative of an emissions exceedance, since the system will not operate when a flame is not present.

Flow (Utility Flare)

- Report all periods during which the control device was not operating for more than one hour; report duration of each event (40 CFR 60.757(f)(3)).

A Table of periods when the control device (open flare) was not operating for more than one hour is provided in Attachment 4. No raw landfill gas was emitted through the control device during the downtime. Therefore, the control device did not allow emissions of raw landfill gas for more than one hour.

3.2 Performance Testing

Performance Test (Utility Flare)

- Complete initial/annual performance test on the open flare in accordance with IEPA-BOA Construction Permit application number 06100058.

The performance test for 2011 was submitted on November 30, 2011.

4.0 Landfill Summary

4.1 Monitored Parameters

Surface Scan

- Report the location of each exceedance of the 500 ppm methane concentration, and the concentration recorded at each exceedance location (40 CFR 60.757(f)(5)).

The quarterly methane surface scans were conducted at the facility as required. A Table of exceedances is provided in Attachment 5. Any exceedances were corrected and re-monitored within the required timeframes.

Semi-Annual Sampling/Analysis

- Perform semi-annual sampling and analysis of landfill gas entering the control system in accordance with IEPA-BOA application number 06100058.

Sampling and analysis of the landfill gas is conducted in conjunction with the performance test for the flare.



ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
DIVISION OF AIR POLLUTION CONTROL -- PERMIT SECTION
P.O. BOX 19506
SPRINGFIELD, ILLINOIS 62794-9506

FOR APPLICANT'S USE

Revision #: _____
Date: ____ / ____ / ____
Page ____ of ____
Source Designation: _____

**COMPLIANCE AND GENERAL
REPORTING FORM****FOR AGENCY USE ONLY**

ID NUMBER: _____

PERMIT #: _____

DATE: _____

THIS FORM IS USED FOR EITHER OF THE FOLLOWING:

- TO REPORT AND CERTIFY COMPLIANCE OF AN ENTIRE SOURCE OR SPECIFIC ITEMS OF EQUIPMENT WITH ALL APPLICABLE REQUIREMENTS DURING A REPORTING PERIOD, OR
- TO IDENTIFY AND ENSURE PROPER PROCESSING OF A SUBMITTED REPORT. THIS FORM SHOULD BE USED AS THE COVER SHEET OF THE SUBMITTED REPORT.

SOURCE INFORMATION

1) SOURCE NAME:

Cottonwood Hills Recycling and Disposal Facility2) DATE FORM
PREPARED:**January 2012**3) SOURCE ID NO.
(IF KNOWN):**163075AAL****GENERAL INFORMATION**

4) INDICATE FOR WHICH OF THE FOLLOWING THIS FORM IS BEING COMPLETED:

**TO REPORT AND CERTIFY COMPLIANCE OF THE SOURCE OR SPECIFIC ITEMS OF EQUIPMENT
WITH ALL APPLICABLE REQUIREMENTS****TO IDENTIFY AND ENSURE PROPER PROCESSING OF A SUBMITTED REPORT**

5) PERIOD COVERED BY THIS REPORT:

FROM: **07 / 01 / 2011**TO: **12 / 31 / 2011**

6) NAME AND PHONE NUMBER OF PERSON TO CONTACT FOR QUESTIONS REGARDING THIS REPORT:

NAME: **Ernest Dennison**TITLE: **District Engineer**PHONE#: (**618**) **271-6788** EXT: **2122**

THIS AGENCY IS AUTHORIZED TO REQUIRE THIS INFORMATION UNDER ILLINOIS REVISED STATUTES, 1991, AS AMENDED 1992, CHAPTER 111 1/2, PAR. 1039.5. DISCLOSURE OF THIS INFORMATION IS REQUIRED UNDER THAT SECTION. FAILURE TO DO SO MAY PREVENT THIS FORM FROM BEING PROCESSED AND COULD RESULT IN THE APPLICATION BEING DENIED. THIS FORM HAS BEEN APPROVED BY THE FORMS MANAGEMENT CENTER.

APPLICATION PAGE _____

Printed on Recycled Paper
400-CAAPP

FOR APPLICANT'S USE

Page 1 of 3

WM01376

COMPLIANCE OF SOURCE OR EQUIPMENT DURING REPORTING PERIOD

- COMPLETE ITEM 7 BELOW IF THIS FORM IS BEING USED TO REPORT AND CERTIFY COMPLIANCE OF THE ENTIRE SOURCE.
- COMPLETE ITEM 8 BELOW IF THIS FORM IS BEING USED TO REPORT AND CERTIFY COMPLIANCE OF SPECIFIC ITEMS OF EQUIPMENT ONLY.

7) WAS THE SOURCE IN COMPLIANCE WITH ALL APPLICABLE REQUIREMENTS FOR THE ENTIRE REPORTING PERIOD?



YES



NO

IF YES, THEN THE "REPORT INFORMATION" SECTION ON PAGE 3 OF THIS FORM DOES NOT NEED TO BE COMPLETED.

IF NO, THEN COMPLETE AND SUBMIT FORM CAAPP-405 - "EXCESS EMISSIONS, MONITORING EQUIPMENT DOWNTIME, AND MISCELLANEOUS REPORTING FORM."

8a) LIST THE EMISSION UNIT(S) AND CONTROL EQUIPMENT FOR WHICH THIS FORM IS BEING COMPLETED TO REPORT AND CERTIFY COMPLIANCE WITH (IF ADDITIONAL SPACE IS NEEDED FOR ITEM 10, ATTACH AND LABEL AS EXHIBIT 400-A):

See Attached Report.

b) IDENTIFY THE APPLICABLE REQUIREMENT(S) FOR WHICH THIS FORM IS BEING USED TO REPORT AND CERTIFY COMPLIANCE WITH:

See Attached Report.

c) IDENTIFY THE APPLICABLE REQUIREMENT(S) WHICH REQUIRE THAT THIS REPORT OR CERTIFICATION BE SUBMITTED:

Semi-Annual NSPS Report

d) WERE THE ABOVE REFERENCED ITEMS IN 8(a) IN COMPLIANCE WITH ALL APPLICABLE REQUIREMENTS FOR THE ENTIRE REPORTING PERIOD?



YES



NO

IF YES, THEN THE "REPORT INFORMATION" SECTION ON PAGE 3 OF THIS FORM DOES NOT NEED TO BE COMPLETED.

IF NO, THEN COMPLETE AND SUBMIT FORM CAAPP-405 - "EXCESS EMISSIONS, MONITORING EQUIPMENT DOWNTIME, AND MISCELLANEOUS REPORTING FORM."

APPLICATION PAGE _____

Printed on Recycled Paper
400-CAAPP

Page 2 of 3

WM01377

REPORT INFORMATION

9) TITLE OF REPORT BEING SUBMITTED:

NSPS Semi-Annual Report

10) IDENTIFY THE APPLICABLE REQUIREMENT(S) WHICH REQUIRES THIS REPORT (IF APPLICABLE):

40 CFR 60.757(f) NSPS

11) BRIEFLY EXPLAIN WHAT THIS REPORT COVERS:

This Semi-Annual NSPS Report is a summary of any exceedences of monitored parameters, periods of downtime for gas collection/control devices, and any expansions/modifications to the gas collection system.

12) ATTACH THE REPORT TO THIS FORM.

See Attached Report

SIGNATURE BLOCK

NOTE: THIS CERTIFICATION MUST BE SIGNED BY A RESPONSIBLE OFFICIAL. APPLICATIONS WITHOUT A SIGNED CERTIFICATION WILL BE RETURNED AS INCOMPLETE.

13) I CERTIFY UNDER PENALTY OF LAW THAT, BASED ON INFORMATION AND BELIEF FORMED AFTER REASONABLE INQUIRY, THE STATEMENTS AND INFORMATION CONTAINED IN THIS APPLICATION ARE TRUE, ACCURATE AND COMPLETE.

AUTHORIZED SIGNATURE:

BY:


AUTHORIZED SIGNATURE

DISTRICT ENGINEER
TITLE OF SIGNATORY

ERNEST H DENNISON

TYPED OR PRINTED NAME OF SIGNATORY

1 / 1 / 17 / 12
DATE

APPLICATION PAGE _____

Printed on Recycled Paper
400-CAAPP

Page 3 of 3

WM01378



ILLINOIS ENVIRONMENTAL PROTECTION AGENCY
DIVISION OF AIR POLLUTION CONTROL – PERMIT SECTION
P.O. BOX 19506
SPRINGFIELD, ILLINOIS 62794-9506

FOR APPLICANT'S USE

Revision #: _____
Date: ____ / ____ / ____
Page ____ of ____
Source Designation: _____

**DELEGATION OF AUTHORITY
FOR RESPONSIBLE OFFICIAL
TO A REPRESENTATIVE**

FOR AGENCY USE ONLY

ID NUMBER: _____

PERMIT #: _____

DATE: _____

THIS FORM SHALL BE USED BY A RESPONSIBLE OFFICIAL TO DELEGATE AUTHORITY TO A REPRESENTATIVE OF SUCH PERSON FOR SIGNATURE ON APPLICATIONS OR CERTIFICATION OF REPORTS TO BE SUBMITTED PURSUANT TO THE CLEAN AIR ACT.

THIS FORM SHALL ONLY BE USED FOR A CORPORATION AT WHICH A PRESIDENT, SECRETARY, TREASURER, OR VICE-PRESIDENT OF THE CORPORATION IN CHARGE OF BUSINESS FUNCTION, OR ANY OTHER PERSON WHO PERFORMS SIMILAR POLICY OR DECISION MAKING FUNCTIONS FOR THE CORPORATION TO TRANSFER THE AUTHORITY AS A RESPONSIBLE OFFICIAL TO A REPRESENTATIVE OF SUCH PERSON. THE REPRESENTATIVE OF SUCH PERSON MUST BE RESPONSIBLE FOR THE OVERALL OPERATION OF ONE OR MORE MANUFACTURING, PRODUCTION, OR OPERATING FACILITIES APPLYING FOR OR SUBJECT TO A PERMIT.

NOTE: THIS TRANSFER OF DELEGATION OF AUTHORITY IS APPLICABLE ONLY IF THE FACILITY EMPLOYS MORE THAN 250 PERSONS OR HAS A GROSS ANNUAL SALES OR EXPENDITURES EXCEEDING \$25 MILLION (IN SECOND QUARTER 1980 DOLLARS).

SOURCE INFORMATION

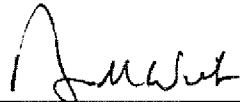
1) SOURCE NAME: Cottonwood Hills Recycling and Disposal Facility

2) DATE FORM
PREPARED: _____

3) SOURCE ID NO.
(IF KNOWN): 163075AAL

TRANSFER OF AUTHORITY

4) I, THE UNDERSIGNED, BEING A PRESIDENT, SECRETARY, TREASURER, OR VICE-PRESIDENT OF THE CORPORATION IN CHARGE OF BUSINESS FUNCTION, OR OTHER PERSON WHO PERFORMS SIMILAR POLICY OR DECISION MAKING FUNCTIONS FOR THE CORPORATION, HEREBY TRANSFER THE AUTHORITY AS A RESPONSIBLE OFFICIAL TO Ernest H Dennison, THEY BEING A REPRESENTATIVE AND RESPONSIBLE FOR THE OVERALL OPERATION OF ONE OR MORE MANUFACTURING, PRODUCTION, OR OPERATING FACILITIES APPLYING FOR OR SUBJECT TO A PERMIT.



AUTHORIZED SIGNATURE

Via President

TITLE OF SIGNATORY

Dennis M. Wilt

TYPED OR PRINTED NAME OF SIGNATORY

01, 31, 2011

DATE

Ernest H Dennison

DELEGATED REPRESENTATIVE

District Engineer

TITLE OF DESIGNATED REPRESENTATIVE

THIS AGENCY IS AUTHORIZED TO REQUIRE THIS INFORMATION UNDER ILLINOIS REVISED STATUTES, 1991, AS AMENDED 1992, CHAPTER 111 1/2, PAR. 1039.5. DISCLOSURE OF THIS INFORMATION IS REQUIRED UNDER THAT SECTION. FAILURE TO DO SO MAY PREVENT THIS FORM FROM BEING PROCESSED AND COULD RESULT IN THE APPLICATION BEING DENIED. THIS FORM HAS BEEN APPROVED BY THE FORMS MANAGEMENT CENTER.

APPLICATION PAGE

Printed on Recycled Paper
500-CAAPP

FOR APPLICANT'S USE

ATTACHMENT 1

COTTONWOOD HILLS RECYCLING AND DISPOSAL FACILITY
WELLHEAD PERFORMANCE COMPLIANCE AND CORRECTIVE ACTION
FOR JULY 1, 2011 to DECEMBER 31, 2011 REPORTING PERIOD

Well	Date	Temp	Pw	CH4%	O%	N%	Date	Corrective Action	Temp	Pw	CH4%	O%	N%	CO
MW07R1		USEPA approved temporary variance of 145 F on April 7, 2011 for 8 months												
MW07R1	11/03/11	120	-0.8	52.7	0.1		11/03/11	Wellhead Pw adjusted on 11/03/11	132	-1.0				0
MW07R1		Variance request was sent to USEPA on 12/07/11 for permanent temperature variance of 140 F												
MW07R1	12/08/11	139	-2.8	54.7	0.0		12/08/11	Wellhead Pw adjusted on 12/08/11	138	-2.9				0
MW08	09/08/11	134	-0.1	57.6	0.0		09/08/11	Wellhead Pw adjusted on 09/08/11	133	-0.4				75
MW08	10/07/11	132	-2.5	57.1	0.0		10/07/11	Wellhead Pw adjusted on 10/07/11	132	-3.9				20
MW08	11/03/11	132	-6.8	46.4	0.1		11/03/11	Wellhead Pw adjusted on 11/03/11	131	-6.5				
MW08	11/10/11	130	-5.8	50.3	0.0		11/10/11	Wellhead Pw adjusted on 11/10/11	130	-5.7				
MW08	12/08/11	131	-5.5	59.4	0.0		12/08/11	Wellhead Pw adjusted on 12/08/11	131	-8.1				0
MW09		USEPA approved permanent temperature variance of 150 F on 04/07/11												
MW09		Variance request was sent to USEPA on 05/20/11 for permanent temperature variance of 155 F												
MW09	07/20/11	151	-0.5	44.4	0.3		07/20/11	Wellhead Pw adjusted on 07/20/11	150	-0.5				75
MW09	08/03/11	152	-1.6	45.3	0.2		08/03/11	Wellhead Pw adjusted on 08/03/11	151	-1.4				
MW09	08/11/11	149	-0.6	42.3	0.3		08/11/11	Wellhead Pw adjusted on 08/11/11	149	-0.4				100
MW09	09/08/11	149	-2.3	30.6	0.0		09/08/11	Wellhead Pw adjusted on 09/08/11	149	-1.9				75
MW09	10/07/11	152	-2.0	44.0	0.0		10/07/11	Wellhead Pw adjusted on 10/07/11	147	-1.5				20
MW09	11/03/11	148	-2.2	45.0	0.0		11/03/11	Wellhead Pw adjusted on 11/03/11	145	-2.2				
MW09	12/08/11	153	-2.7	47.3	0.0		12/08/11	Wellhead Pw adjusted on 12/08/11	152	-2.4				0
MW09	12/15/11	148	-3.3	45.9	0.1		12/15/11	Wellhead Pw adjusted on 12/15/11	157	-17.5				0
MW09	12/15/11	158	-25.4	43.1	0.5		12/15/11	Wellhead Pw adjusted on 12/15/11	158	-25.4				
MW09	12/16/11	158	-26.3	45.4	0.6		12/16/11	Wellhead Pw adjusted on 12/16/11	155	-21.2				
MW10		USEPA approved permanent temperature variance of 145 F on 04/07/11												
MW10		Variance request was sent to USEPA on 05/20/11 for permanent temperature variance of 150 F												
MW10	07/20/11	143	-0.1	50.7	0.2		07/20/11	Wellhead Pw adjusted on 07/20/11	142	0.0				100
MW10	07/29/11	144	-0.2	50.4	0.2		07/29/11	Wellhead Pw adjusted on 07/29/11	146	-0.3				
MW10	08/03/11	149	-1.4	51.8	0.3		08/03/11	Wellhead Pw adjusted on 08/03/11	149	-1.4				
MW10	08/11/11	149	-1.0	50.6	0.4		08/11/11	Wellhead Pw adjusted on 08/11/11	147	-0.5				100
MW10	08/24/11	147	-0.5	48.8	0.4		08/24/11	Wellhead Pw adjusted on 08/24/11	149	-0.5				125
MW10	09/08/11	149	-0.8	49.3	0.1		09/08/11	Wellhead Pw adjusted on 09/08/11	149	-0.7				75
MW10	10/07/11	147	-1.1	52.3	0.3		10/07/11	Wellhead Pw adjusted on 10/07/11	145	-0.8				50
MW10	11/03/11	142	-0.9	49.3	0.1		11/03/11	Wellhead Pw adjusted on 11/03/11	142	-1.0				
MW10	12/08/11	146	-1.9	52.2	0.0		12/08/11	Wellhead Pw adjusted on 12/08/11	147	-2.0				0
MW10	12/15/11	145	-4.2	50.6	0.2		12/15/11	Wellhead Pw adjusted on 12/15/11	154	-21.7				
MW10	12/15/11	155	-27.0	47.7	0.5		12/15/11	Wellhead Pw adjusted on 12/15/11	154	-27.0				
MW10	12/16/11	154	-28.4	46.7	0.8		12/16/11	Wellhead Pw adjusted on 12/16/11	153	-24.7				0
MW19		Variance request was sent to USEPA on 05/20/11 for permanent temperature variance of 140 F												
MW19	07/20/11	135	-0.8	53.2	0.3		07/20/11	Wellhead Pw adjusted on 07/20/11	135	-0.8				175
MW19	08/03/11	133	-1.0	54.9	0.0		08/03/11	Wellhead Pw adjusted on 08/03/11	134	-1.1				
MW19	08/11/11	134	-0.9	55.2	0.5		08/11/11	Wellhead Pw adjusted on 08/11/11	134	-0.8				75
MW19	09/08/11	133	-0.2	52.0	0.2		09/08/11	Wellhead Pw adjusted on 09/08/11	133	-0.2				100
MW19	10/07/11	133	-0.7	54.0	0.1		10/07/11	Wellhead Pw adjusted on 10/07/11	133	-0.8				50
MW19	11/03/11	131	-0.6	53.0	0.0		11/03/11	Wellhead Pw adjusted on 11/03/11	130	-0.6				
MW19	12/08/11	131	-0.9	54.1	0.0		12/08/11	Wellhead Pw adjusted on 12/08/11	131	-0.9				0
MW19	12/15/11	131	-2.1	52.6	0.1		12/15/11	Wellhead Pw adjusted on 12/15/11	135	-11.6				
MW19	12/15/11	137	-17.5	50.5	0.2		12/15/11	Wellhead Pw adjusted on 12/15/11	136	-17.5				
MW19	12/16/11	138	-18.3	43.2	0.3		12/16/11	Wellhead Pw adjusted on 12/16/11	137	-13.9				0

Action shall be initiated to correct the exceedence within 5 calendar days. If correction of the exceedence can not be achieved within 15 calendar days of the first measurement, the gas system shall be expanded if temperature exceeds 55 Celcius, wellhead pressure Pw is positive, Nitrogen is 20% or above, or Oxygen is 5% or above.

ATTACHMENT 2

**COTTONWOOD HILLS RECYCLING AND DISPOSAL FACILITY
GAS WELL USEPA VARIANCE APPROVALS**

Gas Well	Approved Temp	USEPA Approval	Comments
MW07R	Temporary	06/24/10	Request 6 month approval of 145 F and O2 variance on 06/08/10 Approve 120 days from 06/02/10 to be below 131 F and O2 below 5%
			Requested permanent approval of 140 F and O2 of 10% on 08/06/10 Well Decommissioned
MW07R1	145 F Temporary	04/07/11	Requested permanent approval of 145 F on 02/25/11 Requested permanent approval of 145 F on 04/04/11 USEPA approved a temporary variance for 8 months on 04/07/11 Requested permanent approval of 140 F on 12/07/11
MW09	149 F Temporary	04/10	Requested permanent approval of 150 F on 03/23/10 Temporary approval for 6 months
	Pressure/Temp	05/17/10	Notify high CO, request well shutoff & pressure variance on 04/23/10 Approved temporary variances for 120 days from 04/12/10
	150 F	04/07/11	Requested permanent approval of 150 F on 08/06/10 Requested permanent approval of 154 F on 02/25/11 Requested permanent approval of 149 F on 04/04/11 Approved 150 F
			Requested permanent approval of 155 F on 05/20/11
MW10	Pressure/Temp	06/10/10	Requested approval of 140 F and positive pressure on 05/27/10 Approved temporary variances for 120 days from 05/14/10
	145 F	04/07/11	Requested permanent approval of 140 F on 08/06/10 Requested permanent approval of 147 F on 04/04/11 Approved 145 F
			Requested permanent approval of 150 F on 05/20/11
MW19			Requested permanent approval of 140 F on 05/20/11



WASTE MANAGEMENT OF ILLINOIS, INC.

601 Madison Road
East St. Louis, Illinois 62201
(618) 271-6788
(618) 271-1227 Fax

December 7, 2011

Ms. Linda Rosen
USEPA (AE-17J) – Air & Radiation Division
Air Enforcement and Compliance Assurance Branch
77 West Jackson Boulevard
Chicago, Illinois 60604

**Cottonwood Hills Recycling and Disposal Facility - Site I.D. No. 163075AAL
Permanent Temperature Variance Request for Landfill Gas Extraction Well MW07R1**

Dear Ms. Rosen:

This letter is written as a follow-up to my letter of April 4, 2011 and the USEPA response letter dated April 7, 2011 on a temperature variance request for landfill gas extraction well MW07R1.

Background Information

Landfill gas extraction well MW07R (replaced by MW07R1) had operating temperatures that exceeded 131°F. Corrective actions were initiated within the 5 day regulatory time frame but could not reduce the temperature to below 131°F. A variance request was submitted to the USEPA on April 4, 2011 requesting a permanent higher operating temperature of 145°F in replacement well MW07R1.

Landfill gas extraction well MW07R1 was installed on November 10, 2010, connected to the header system in December 2010 and January 2011, and monitoring began January 7, 2011. The initial reading on January 7, 2011 was below the 131°F limit, however, with continued gas extraction, temperatures rose to 145°F in February 2011 (see attached table). A carbon monoxide (CO) reading was taken on well MW07R1 on February 15, 2011 and the Dräger tube reading indicated CO was less than 100 ppm. The well vacuum was reduced on the gas well as a corrective action within the 5 day regulatory time frame in order to try and reduce the operating temperature of the well. The reduction in vacuum has lowered the gas temperature in the well to below 131°F. However, in order to reduce the temperature, with reduced vacuum the well only collects less than 10 scfm of gas when a well of this depth should be collecting/removing more gas. Since there was no indication of subsurface oxidation (such as smoke, subsidence, or high CO), and the percent oxygen remained low even at higher vacuums and the higher temperatures are typical for gas wells in the area with substantial waste thickness (MW07R1 was drilled to 122 ft deep), this original variance letter requested a permanent higher operating temperature of 145°F or below in well MW07R1.

From everyday collection to environmental protection, Think Green® Think Waste Management.

The USEPA issued a variance approval letter on April 7, 2011 that allowed for a temporary higher operating temperature in well MW07R1 for 8 months until additional data could be collected.

MW07R1

Eight additional months of data have now been collected and are provided on the attached table. Operating temperatures in well MW07R1 ranged from 113°F to 145°F during the period and varied somewhat with vacuum and volume of gas collected. There were no indications of subsurface oxidation and carbon monoxide levels remained low. In order to adjust/increase the vacuum to collect the appropriate amount of gas that is generated within the thicker waste mass a **permanent higher operating temperature of 140°F or below is needed in well MW07R1;** which is less than the original request.

We do not believe any of the elevated well temperatures are due to subsurface oxidation since there are no indications of fire, nor smoke, nor subsidence around the wells, nor elevated CO readings. There is also no reason to believe there are any structural problems related to the operation of the well since oxygen levels in the well are less than 1%. In order to properly operate the well by adjusting vacuums when warranted and to collect sufficient volumes of gas from the well a higher operating temperature is needed.

Please note that for the Waste Management of Illinois, Inc. landfill sites in the greater St. Louis area it is quite common for the normal operating temperature for wells 100 ft deep or deeper to be approximately 140°F or greater with no indications of subsurface oxidation due to the high moisture content and organic content of waste streams such as POTW sludges and the relatively high annual rainfall of 40" per year. Milam Recycling and Disposal Facility has over 20 wells with USEPA approved temperature variances of 140°F to 150°F

If you require additional information, please call me at (618) 271-6788 Ext 2122 or 314-568-2025.

Sincerely,
Waste Management of Illinois, Inc.



Ernest H Dennison, PE.
District Engineer

Cc: IEPA-BOA-Compliance and Enforcement Section
1021 North Grand Avenue East
Springfield, Illinois 62702

COTTONWOOD HILLS RECYCLING AND DISPOSAL FACILITY
LANDFILL GAS EXTRACTION WELL MW07R1

Device ID	Date Time	CH4 %	CO2 %	O2 %	Initial Static Pressure ("H2O)	Initial Temperature (Deg F)	Adjusted Temperature (Deg F)	Adjusted Static Pressure ("H2O)	Initial Flow SCFM	Adjusted Flow SCFM	CO ppm
MW07R1	01/07/2011 12:42	55.1	39.8	0	-1.2	129	130	-1.7	11	16	
MW07R1	02/15/2011 14:13	50.5	37.6	0.2	-3	145	139	-0.7	16	9	< 100
MW07R1	02/23/2011 11:33	46.2	36.7	0	-1.1	132	133	-1.1	4	5	
MW07R1	03/04/2011 11:35	54.1	38.7	0.4	-0.8	126	126	-0.8	4	6	
MW07R1	04/05/2011 10:17	44.8	34.2	0.4	-4.1	126	122	-3.8	6	5	
MW07R1	04/07/2011 09:50					145	145				
MW07R1	04/14/2011 01:44	50.6	36.3	0	-0.9	125	126	-1.1		8	150
MW07R1	05/13/2011 12:46	50.8	36.5	0.2	-2	137	137	-2.1	5	5	
MW07R1	06/16/2011 02:09	51.4	37.8	0.5	-0.8	114	116	-1	3	4	
MW07R1	07/20/2011 09:18	54.3	37.2	0.3	-1.3	126	131	-0.9	3	6	
MW07R1	08/03/2011 10:58	55.4	36.8	0.1	-0.2	113	118	-0.7	9	9	
MW07R1	09/08/2011 02:12	49.1	37.4	0.1	-2.3	140	138	-2	5	5	50
MW07R1	10/07/2011 10:36	54.2	37.6	0	-0.5	132	132	-0.5	2	3	25
MW07R1	11/03/2011 09:50	52.7	39.6	0.1	-0.8	120	132	-1	10	10	

ATTACHMENT 3



WASTE MANAGEMENT OF ILLINOIS, INC.

601 Madison Road
East St. Louis, Illinois 62201
(618) 271-6788
(618) 271-1227 Fax

December 12, 2011

Illinois Environmental Protection Agency
Bureau of Land – Planning and Reporting
1021 North Grand Avenue East
Springfield, Ill 62702

1630755017 – St. Clair County
Cottonwood Hills Recycling and Disposal Facility

Submittal of Gas Well Logs

Dear Sirs:

This letter transmits gas well installation logs for MW13, MW14, MW17, MW79, and MW80 at the above referenced facility.

If you have any questions, please call me at (618) 271-6788 Ext 2122.

Sincerely,
Waste Management of Illinois, Inc.

A handwritten signature in black ink, appearing to read "Ernest H. Dennison". The signature is fluid and cursive, with the first name "Ernest" being more prominent.

Ernest H Dennison, PE
District Engineer

From everyday collection to environmental protection, Think Green® Think Waste Management.

AQUATERRA

ENVIRONMENTAL SOLUTIONS, INC.

13 Executive Drive, Suite 1
Fairview Heights, Illinois 62208

GAS WELL CONSTRUCTION DIAGRAM

PROJECT NUMBER: 5082.10

GAS WELL NO.: MW-13

INSTALLATION START DATE: 12-3-2011

DRILLER: LEVI REED

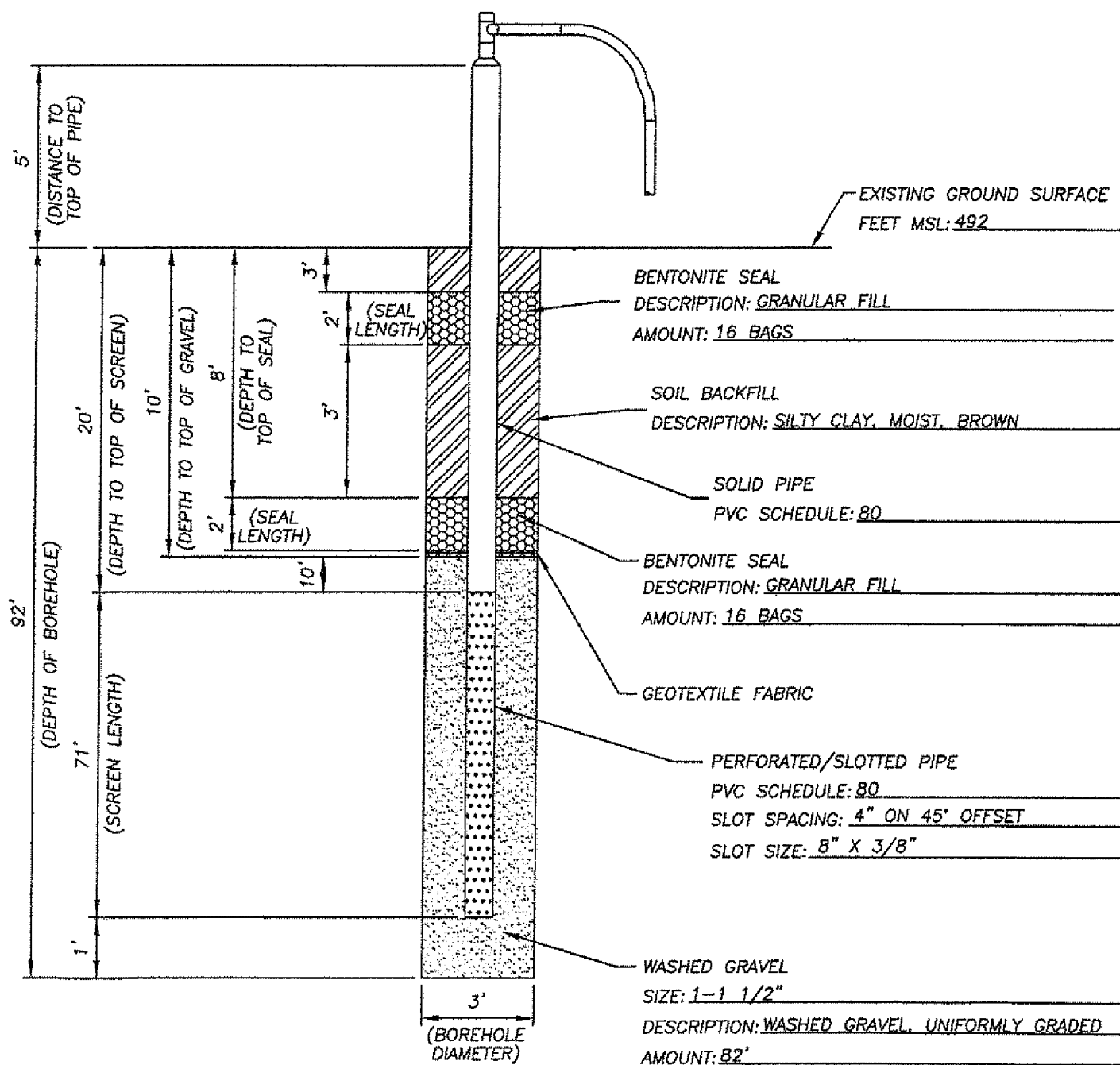
PROJECT NAME: COTTONWOOD HILLS 2011 GCCS CQA

WELL LOCATION: N-578871, E-611476

COMPLETION DATE: 12-3-11

INSPECTOR: TIM POOL

COMMENTS: NOT TO SCALE



AQUATERRA

ENVIRONMENTAL SOLUTIONS, INC.

13 Executive Drive, Suite 1
Fairview Heights, Illinois 62208

GAS WELL CONSTRUCTION DIAGRAM

PROJECT NUMBER: 5082.10

GAS WELL NO.: MW-14

INSTALLATION START DATE: 12-2-2011

DRILLER: LEVI REED

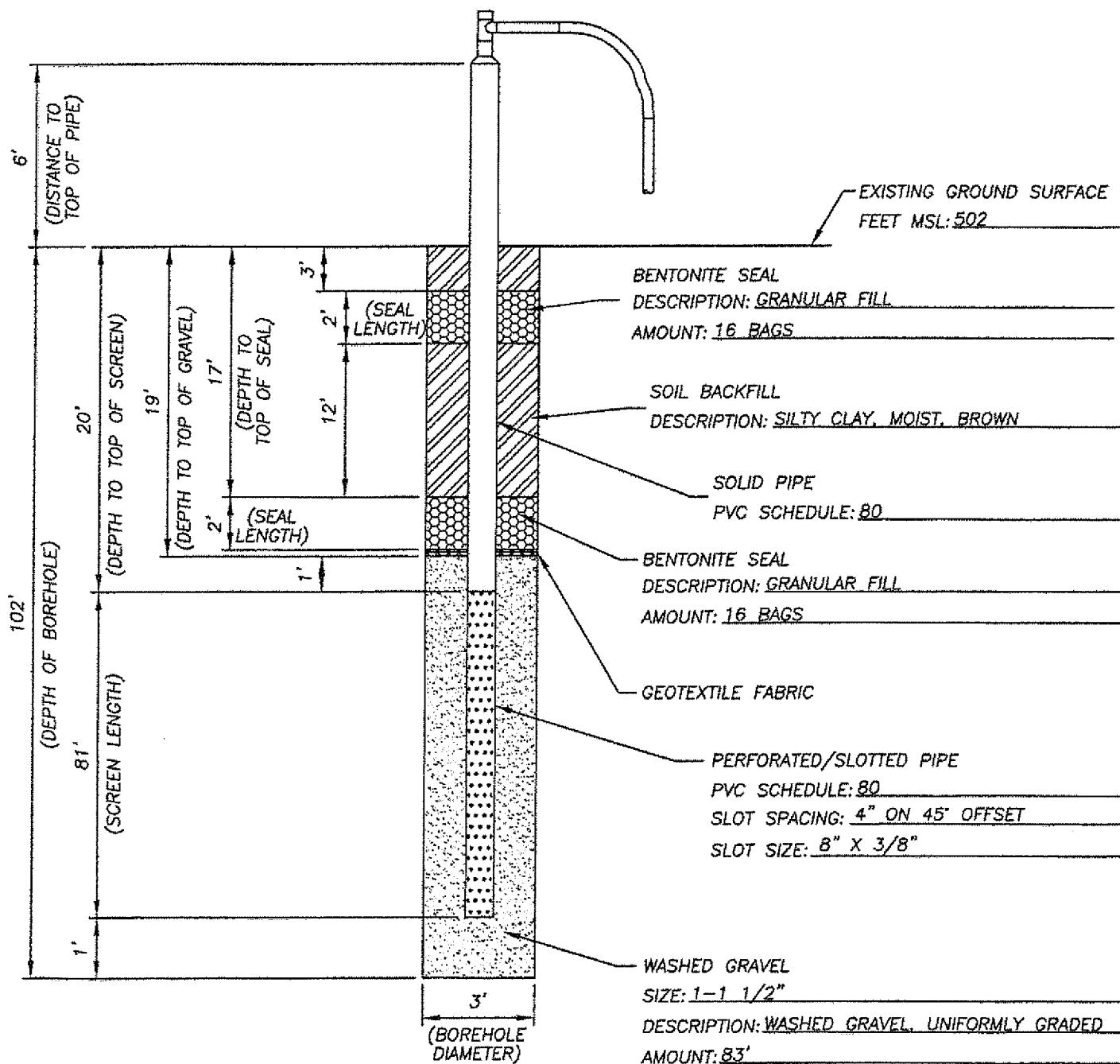
PROJECT NAME: COTTONWOOD HILLS 2011 GCCS CQA

WELL LOCATION: N-579007, E-611273

COMPLETION DATE: 12-2-11

INSPECTOR: TIM POOL

COMMENTS: NOT TO SCALE



AQUATERRA

ENVIRONMENTAL SOLUTIONS, INC.

13 Executive Drive, Suite 1
Fairview Heights, Illinois 62208

GAS WELL CONSTRUCTION DIAGRAM

PROJECT NUMBER: 5082.10

PROJECT NAME: COTTONWOOD HILLS 2011 GCCS CQA

GAS WELL NO.: MW-17

WELL LOCATION: N-578565, E-611273

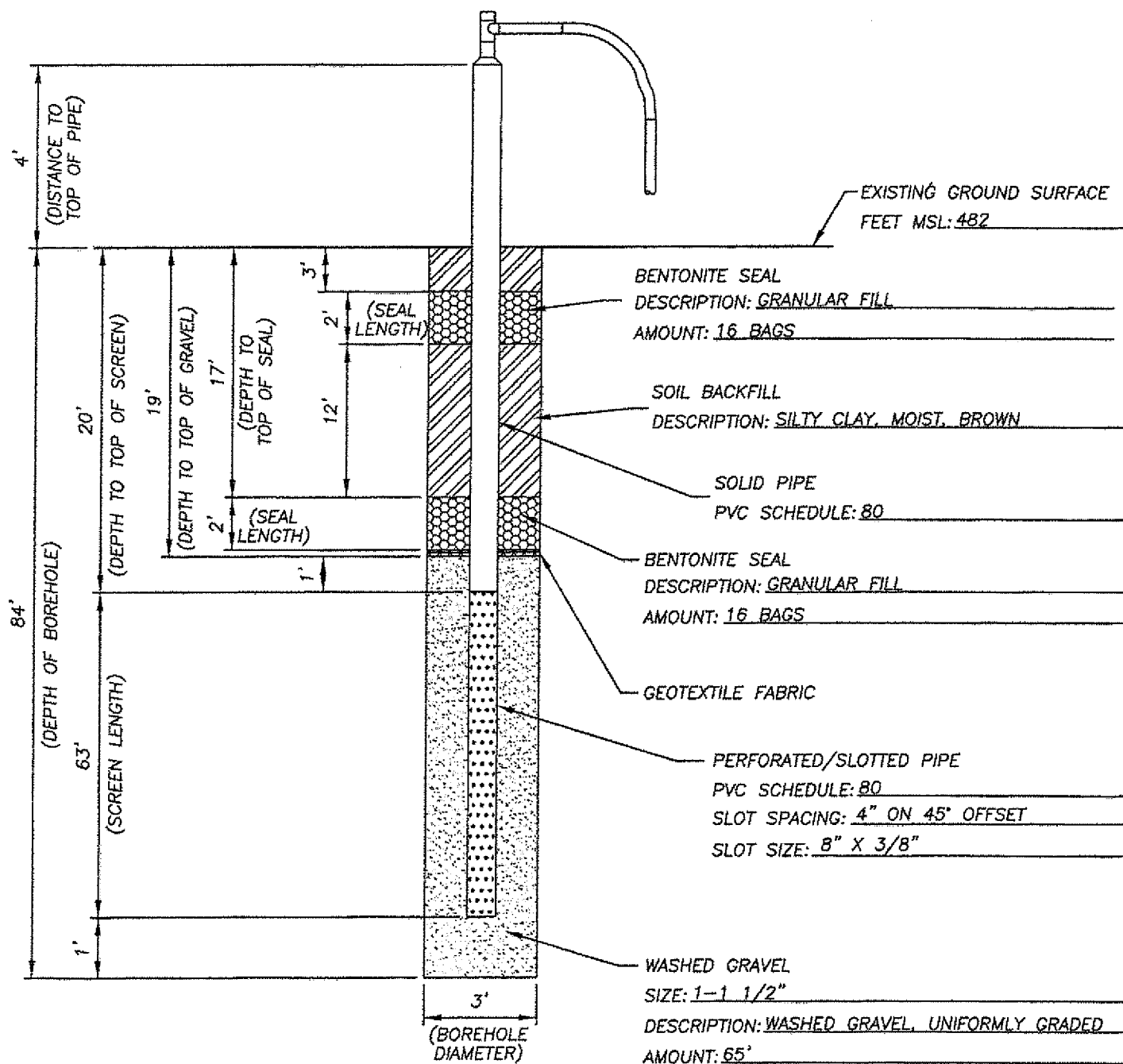
INSTALLATION START DATE: 11-21-2011

COMPLETION DATE: 12-2-11

DRILLER: LEVI REED

INSPECTOR: TIM POOL

COMMENTS: NOT TO SCALE, DELAYED INSTALLATION DUE TO HEAVY RAINS.



WM01391

GAS WELL CONSTRUCTION DIAGRAM

PROJECT NUMBER: 5082.10

PROJECT NAME: COTTONWOOD HILLS 2011 GCCS CQA

GAS WELL NO.: MW-79

WELL LOCATION: N-579137, E-611461

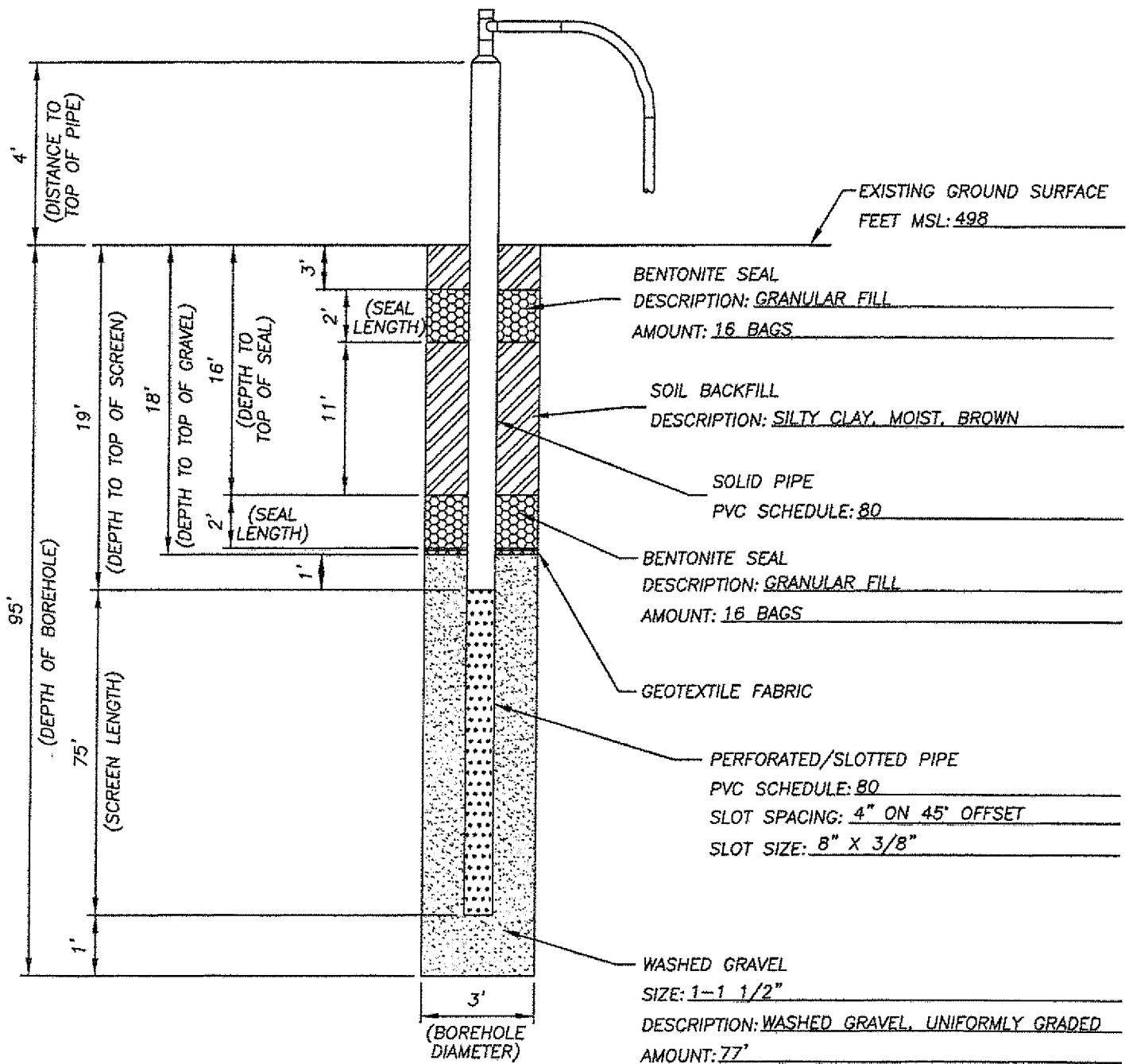
INSTALLATION START DATE: 12-2-2011

COMPLETION DATE: 12-2-2011

DRILLER: LEVI REED

INSPECTOR: TIM POOL

COMMENTS: NOT TO SCALE



AQUATERRA

ENVIRONMENTAL SOLUTIONS, INC.

13 Executive Drive, Suite 1
Fairview Heights, Illinois 62208

GAS WELL CONSTRUCTION DIAGRAM

PROJECT NUMBER: 5082.10

PROJECT NAME: COTTONWOOD HILLS 2011 GCCS CQA

GAS WELL NO.: MW-80

WELL LOCATION: N-578760, E-611147

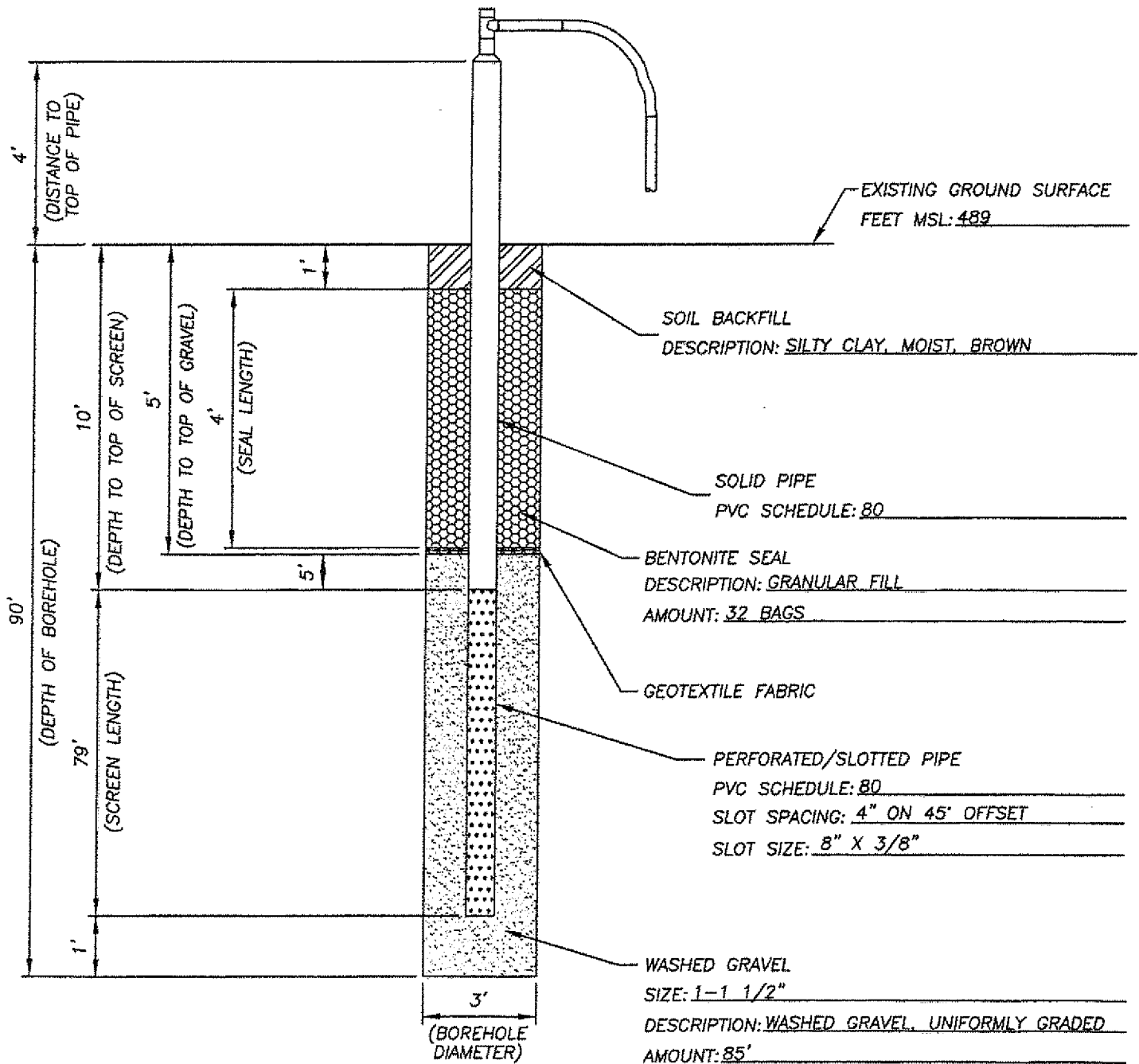
INSTALLATION START DATE: 11-21-2011

COMPLETION DATE: 11-21-2011

DRILLER: LEVI REED

INSPECTOR: JIM POOL

COMMENTS: NOT TO SCALE. OPERATOR OVERFILLED BORE HOLE WITH ROCK. NO SOIL WAS ADDED BETWEEN BENTONITE SEALS. 4' OF BENTONITE WAS BACKFILLED AND THE WELL WAS COMPLETED WITH 1' OF SOIL BACKFILL TO EXISTING GRADE.



ATTACHMENT 4

COTTONWOOD HILLS GAS COLLECTION SYSTEM
REPORTING FOR NON OPERATING PERIODS OF CONTROL DEVICE
3000 SCFM OPEN FLARE

Per Sec. 60.757 : "Each owner or operator...shall include the following information with the annual report... description and duration of all periods when the control device was not operating for a period exceeding one hour and length of time the control device was not operating."

Date	Time	Description of Outage	Time Back In Service	Hours	Performed By
10/28/11	2:08 PM	Cleaned Flame Arrester check VLV clogged	10/28/11 @ 2:56 PM	0.8	DY
11/03/11	10:50 AM	Water in Flare Check VLV clogged, cleaned	11/03/11 @ 11:14 AM	0.4	DY
11/27/11	00:40 AM	Water in Flare Check VLV clogged, cleaned	12/01/11 @ 08:34 AM	103.9	DY
12/24/11	7:46 PM	Water in Flare Leachate pump down	12/25/11 @ 09:52 AM	14.1	DY
12/26/11	2:58 PM	Replace Leachate pump flare shut down Hi flow	12/26/11 @ 05:08 PM	2.2	DY
12/29/11	1:16 PM	Colman Hooking up Header to New Gas Wells	12/29/11 @ 02:24 PM	1.1	DY
					DY
					DY
					DY
					DY
					DY
					DY
					DY
					DY
TOTAL				122.5	

Verified by :
DOUG YEARIAN Gas Technician

ATTACHMENT 5

COTTONWOOD HILLS RECYCLING AND DISPOSAL FACILITY
 QUARTERLY SURFACE SCAN MONITORING EXCEEDENCES
 FOR JULY 1, 2011 TO DECEMBER 31, 2011 REPORT PERIOD

Quarter	Date	Location		Methane Conc ppm	Corrective Action	Date	Methane Conc ppm	Additional Corrective Action	Date	Methane Conc ppm
		North	West							
3rd	09/13/11			All < 500	None Required			NA		
4th	11/23/11			All < 500	None Required			NA		